

2002/0114595); rejected claims 1-14, 19-22, and 25 under 35 U.S.C. § 102(e) as being anticipated by Beals et al. (U.S. Pat. App. Pub. No. 2002/0040731); rejected claims 15-17, 23, 24, 26, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Beals et al.; and rejected claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Beals et al. in view of Klamm et al. (U.S. Pat. No. 4,756,510). These rejections and objection of the claims is traversed and reconsideration of the claims is respectfully requested in view of the following amendments and remarks.

The Examiner objected to paragraphs [0004], [0032], [0036], [0042], [0056], and [0060] as containing typographical informalities. Applicants respectfully submit that the aforementioned objections to the specification are moot in view of the foregoing amendments to the specification.

The rejection of claims 1-4 under 35 U.S.C. § 102(e) as being anticipated by Potash is respectfully traversed and reconsideration is requested.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example "...a service pipe that conveys gas between a gas main and a gas meter...; a flexible tube disposed inside the service pipe, the tube sealed at each end to an outside surface of the service pipe..." None of the cited references, including Potash, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 1 and 2-4, which depend from claim 1, are allowable over the cited references.

The Examiner cites Potash as disclosing "...the apparatus comprising a service pipe (See 10 in Figure 1a...); a flexible tubing disposed inside the service pipe (See 24 in Figure 1a...), the tube sealed at each end to an outside surface of the service pipe..."

Applicants respectfully submit, however, Potash discloses at paragraph [0032], lines 10-17 "...in FIG. 1a, an exploded view shows the individual components. A cross section of pipe 10 of indeterminate length is depicted... In the embodiment of FIG. 1, wye-fitting 16 is inserted between pipe sections 12 and 10, and another wye-fitting 18 between pipe sections 10 and 14. The wye-fittings provide entry and exit points for the optical fiber..." Accordingly, Applicants respectfully submit Potash fails to disclose at least the aforementioned combination of elements.

The rejection of claims 1-14, 19-22, and 25 under 35 U.S.C. § 102(e) as being anticipated by Beals et al. is respectfully traversed and reconsideration is requested.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example "...a service pipe that conveys gas between a gas main and a gas meter...; a flexible tube disposed inside the service pipe...; and a fiber optic cable disposed inside the flexible tube..." None of the cited references, including Beals et al., singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 1 and 2-5, which depend from claim 1, are allowable over the cited references.

Claim 6 is allowable over the cited references in that claim 6 recites a combination of elements including, for example "...stopping gas flow from a gas main to a service pipe that conveys gas between the gas main and a gas meter...; joining to the service pipe, at a first location ...a first nipple that provides for a flexible tube a pass way between an inside of the service pipe and an outside of the service pipe; joining to the service pipe at a second location ... a second nipple that provides for the flexible tube a pass way between the inside of the service pipe and the outside of the service pipe; feeding the flexible tube through a catch nipple of the first nipple and the second nipple...; sealing the flexible tube to the first nipple and the second nipple...; and feeding a fiber optic cable through the flexible tube." None of the cited references,

including Beals et al., singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 6 and 7-24, which depend from claim 6, are allowable over the cited references.

Claim 25 is allowable over the cited references in that claim 1 recites a combination of elements including, for example “sealing... a flexible tube in a service pipe...; feeding a fiber optic cable through the flexible tube” None of the cited references, including Beals et al., singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 25 and claims 26 and 27, which depend from claim 25, are allowable over the cited references.

The Examiner cites Beals et al. as disclosing “the apparatus comprising a service pipe (See 10 in Figure 3...); a flexible tubing disposed inside the service pipe (See 8 in Figure 3, paragraph 0061-0072)...; and a fiber optic cable disposed inside the flexible tube (See 8 in Figure 3, paragraph 0045, 0072).”

Applicants respectfully submit, however, the object designated by reference numeral “8” in Beals et al. is a fiber optic conduit that contains one or more bundles of fiber optic cable (see, for example Beals et al., paragraph [0045], lines 7-9). Accordingly, Applicants respectfully submit Beals et al. fails to disclose at least the aforementioned combination of elements.

The rejection of claims 15-17, 23, 24, 26, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Beals et al. is respectfully traversed and reconsideration is requested.

Claims 15-17, 23, and 24 include all of the limitations of claim 6, as discussed above, and Beals et al. fails to teach or suggest at least these features of independent claim 6 as recited above. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claims 15-17, 23, and 24 in view of claim 6, as above.

Claims 26 and 27 include all of the limitations of claim 25, as discussed above, and Beals et al. fails to teach or suggest at least these features of independent claim 25 as recited above. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claims 26 and 27 in view of claim 25, as above.

The rejection of claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Beals et al. in view of Klamm et al. is respectfully traversed and reconsideration is requested.

Claim 18 includes all of the limitations of claim 6, as discussed above, and Beals et al. fails to teach or suggest at least these features of independent claim 6 as recited above. Similarly, Klamm et al. fails to cure the deficiencies of Beals et al. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claim 18 in view of claim 6, as above.

Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited. Should the Examiner deem that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at (202) 496-7500.

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If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

McKENNA LONG & ALDRIDGE LLP

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By  /
Rebecca Goldman Rudich
Registration No. 41,786

Kurt M. Eaton
Registration No. 51,640

1900 K Street, N.W.
Washington, D.C. 20006
Telephone No.: (202) 496-7500
Facsimile No.: (202) 496-7756

MARKED UP VERSION OF THE AMENDED SPECIFICATION

Please delete paragraph [0004] and replace with the following:

--[0004] Fiber optic cables are usually buried to protect from exposure to weather and accidents and to protect from vandalism. In addition, [may] many community regulations require cables be buried. Burying cables in cities is inconvenient and costly. Roads are closed for days at a time while trenches are cut, cable is laid, junction boxes are installed, cables are connected, and roads are repaired. There is a trend among some communities to require cable-laying contractors to repave the streets rather than just patch the cut. All these factors increase the cost per unit distance of laying the cable in cities.--

Please delete paragraph [0032] and replace with the following:

-- [0032] After installing the system, the service pipe 220 includes two nipple assemblies 271 and 272 that form a pressure-tight seal with the flexible tube 290. A fiber optic cable 295 passes through the nipple assemblies 271, [271] 272 and the flexible tube 290 inside the service pipe 220. One end of the fiber optic cable 295 connects to the network cable in telecom handhole 230. The other connects to equipment, not shown, in the building at the service riser 208.--

Please delete paragraph [0036] and replace with the following:

-- [0036] Pressure fittings are then used to form a pressure-tight seal rated for [a] certain maximum pressures somewhat greater than the expected operating pressure for the gas delivery system. For example, the tube is passed through the adapter nut 132 and gasket 134 and fitted onto the stiffener 138 of adapter body 136; and the adapter nut is tightened. The seal is rated for pressures of about 75 psig to about 100 psig.--

Please delete paragraph [0042] and replace with the following:

-- [0042] In [n] step 320, a first nipple is joined to the service pipe 220 at the building-side location. For example, at that location a small diameter hole is drilled into the service pipe and a matching diameter pipe is welded at about a 45-degree angle to cover the hole in the service pipe. The nipple is angled such that the horizontal component of a vector, which has its base at the tip of the nipple and its head at the joint with the outer surface of the service pipe, is directed to the targeted location of the second nipple. Step 320 includes the step of forming a pressure tight seal between the nipple and the service pipe. In some embodiments, step 320 is performed after step 340 or after both steps 340 and 342, as described below.--

Please delete paragraph [0056] and replace with the following:

-- [0056] In step 372, the flow of gas into the service pipe is restarted. For example, in the illustrated embodiment stop valve 205 is opened. This embodiment also includes pressurizing the service pipe and checking all fittings for leaks with soap film, including the couples [361, 362] 261, 262 and the nipple assemblies, [371, 372] 271, 272. After passing the test, this embodiment includes bonding the couples, priming and wrapping all connections. Some embodiments include reconnecting the service riser 208 if it was disconnected, removing a by-pass line or tank connected to provide temporary service, and checking gas equipment in the building to ensure all are operating properly and that the gas pressure is set in the correct range. In some embodiments, step 372 includes refilling any access holes dug, and otherwise cleaning up the work sites.--

Please delete paragraph [0060] and replace with the following:

-- [0060] In step 420 a flexible tube [in] is sealed in the service pipe. The tube is sealed in such a manner as to not leak for pressures up to a certain maximum pressure. For example, tube 290 is sealed in service pipe 220 with pressure fittings at nipple assemblies 271 and 272 so

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as not to leak gas at least up to a pressure of 100 psig, as described above for steps 310 through 350 of method 300.--